



2004 NATIONAL SCHOLARS PROGRAM ANNUAL REPORT

A GROWING TRADITION OF EXCELLENCE

CLEMSON
UNIVERSITY



OUR MISSION STATEMENT

In collaboration with other University offices and programs, the mission of Clemson's National Scholars Program is to

- Recruit and select the top high school students from throughout the United States.
- Provide a competitive scholarship that covers all tuition, fees and other required expenses.
- Create and program intellectually challenging and rewarding enrichment opportunities.
- Provide individual and group advising that addresses and enhances the National Scholars' interests and skills.
- Coordinate a rewarding summer of study and travel in Great Britain.
- Prepare the National Scholars to excel in graduate school and on fellowship applications.

The Clemson University National Scholars Program reached several important milestones during the past year.

- We welcomed one of the most diverse groups of first-year scholars ever — eight women and four men from six different states.
- The number of National Scholars grew to 39. The scholars now represent 12 states and 24 majors. They are outstanding individuals, and together they have grown into a remarkable community. They challenge and support each other, and enrich the Clemson community with their energy and leadership.

-FORGING AHEAD

- We offered three new classes designed for the National Scholars: an intensive freshman seminar that explores issues of education, class and power; a survey course on British history and culture to prepare the freshmen for their summer experience abroad; and an advanced leadership seminar for the older scholars taught by professors Dan Benjamin and Bobby McCormick in the Department of Economics.
- A group of 13 National Scholars traveled to Yellowstone National Park to explore the ecology, history and wildlife of the park with one of the top ecologists in the United States, Hank Fischer. Fischer drew on his experience as one of the leaders in repopulating wolves in the West to give the scholars a unique look at one of the nation's most important natural landmarks.
- In cooperation with Calhoun Honors College, the University's honors program, we supported several of the scholars as they completed internships and study abroad experiences throughout the United States and the world, including Mexico, Switzerland, Slovakia, Tanzania and Greece.
- In May 2004, we will graduate our first class of National Scholars. These eight men and women will head off to the top medical, law and graduate schools in the country, taking their Clemson education and their Clemson experience with them. Among these exceptional students are two Goldwater Scholars and finalists for the Rhodes, Marshall and Truman scholarships.



A COMPREHENSIVE PROGRAM

Clemson's National Scholars Program provides enrichment and support throughout the scholars' years at Clemson. Highlights include the following:



Freshman Year

National Scholars Orientation Retreat

The freshman scholars learn to work together and become part of the National Scholars community.

Freshman Seminar

This seminar provides an intensive introduction to ideas and issues that are critical to success during the freshman year and beyond.

Summer Study Abroad

After studying British history and culture during the spring semester, the freshman National Scholars study and travel in the United Kingdom and other countries in Europe.

Sophomore Year

Leadership Seminar

Top Clemson professors reinforce team-building, communication and problem-solving skills. They also introduce the National Scholars to successful leaders from all walks of life.

LeaderShape Institute

Selected National Scholars attend this premier international program for college student leaders.

Junior Year

Internship/Research Support

The National Scholars team works closely with the Calhoun Honors College to provide guidance and support for student internships and research experiences at home and abroad.

Junior Seminar

A series of role-playing exercises helps the National Scholars expand their understanding of critical problems and their ability to negotiate, cooperate and compete with others. *(Projected 2005.)*



Senior Year

Senior Capstone Experience

The National Scholars work together to solve a problem and make a contribution to the University and the community. *(Projected 2006.)*

Ongoing Programs

Enrichment Travel

The National Scholars expand their horizons through domestic and international travel experiences such as a 2003 trip to Yellowstone National Park to study environmental and conservation issues.

Specialized Seminars and Short Courses

- The scholars take one- or two-session short courses that focus on a key issue or skill such as negotiation techniques.
- They participate in dinner/discussions and meetings with top faculty, University administrators and community leaders.
- They take advantage of on- and off-campus opportunities to meet and exchange ideas with key leaders from a wide

"I have total confidence that I will leave Clemson fully prepared for medical school. Four years of guidance from professors and the National Scholars Program have helped me develop ambitious educational and professional goals. In addition, the program has exposed me to enriching experiences outside the traditional classroom. One of the biggest privileges has been the opportunity to travel to Italy, Switzerland and France with the other scholars. It was great to study subjects outside my major and in a completely new setting."



ASHLEY DAHL | **MONTGOMERY, ALA.**

2000 NATIONAL SCHOLAR

Major: **Microbiology**

Campus Involvement and Leadership: **Alpha Delta Pi sorority, Student Government (assistant director for organizations), Dixon Fellows Program, Mortar Board**

Key Research: **Studies on growth hormones and the development of adolescents with diabetes**

Internships and Learning Experiences: **Alabama Children's Hospital (summer 2002); study abroad at the University of La Verne in Athens, Greece (summer 2003)**

Select Courses Completed: **Physiological Psychology, Human Health and Disease, Principles of Human Nutrition, Bacteriology, Virology, Cancer and Aging, Bacterial Physiology, Immunology, Physiological Chemistry**



JOSEPH GODSEY | KINGSFORT, TENN.

2003 TRUMAN SCHOLAR FINALIST
2000 NATIONAL SCHOLAR

Majors: Computer engineering and political science

Campus Involvement and Leadership: Blue Key, Mortar Board, *The Tiger* newspaper (layout coordinator and columnist), Student Senate, Calhoun Society (president), Dixon Fellows Program, Student Government Cabinet (R&D director), Tiger Cup (director)

Key Research: American news coverage of the 1994 Rwandan genocide and refugee crisis and the resulting U.S. foreign policy

Internships and Learning Experiences: Scientific Research Corporation (summer 2002); International Criminal Tribunal for Rwanda (ICTR) in Arusha, Tanzania (summer 2003)

Select Courses Completed: Modern Political Thought, International Politics in Crisis, European Politics, American Constitutional Law, U.S. Foreign Policy, Electrical Engineering, Circuits, Systems and Signals, Microcomputer Interfacing

"The National Scholars Program has taken an already unbelievable institution and added an extra layer of quality and caring that truly made my experience at Clemson meaningful. With the National Scholars Program, you regularly interact with top faculty and administrators; you are given many opportunities to develop yourself personally through travel, research and mentorship; and you know that at any time, someone can help you personally facilitate applications, classes or any obstacle before you. Clemson University is one of the nation's best-kept secrets, and the National Scholars Program goes to the core of that quality and promise. I sincerely believe that Clemson gives something to the students that no other University offers. Not only do you get a strong education, but Clemson will help you develop as an individual, making you capable of facing life's greatest challenges."



"The greatest part of the National Scholars Program has been constant exposure to an intelligent, dedicated academic community. Seeing others strive to pursue their goals and interests, whatever they may be, has helped spur me on to pursue my goals. It can be easy — with the sometimes-overwhelming press of course work, extracurriculars and football — to simply go with the flow and graduate with a degree and nothing else. Being a part of the National Scholars Program has kept me involved in the world outside of class while also giving me the drive to go further in physics than classes alone would take me. Being a National Scholar has prepared me to be a better physicist while keeping me well-rounded and active. I have always enjoyed the company of my fellow scholars. It is wonderful having a peer group that is like-minded in academics but diverse in interests; this leads to all sorts of good times. The National Scholars faculty and staff have always bent over backward to be helpful."



MATTHEW KERR | **ORANGEBURG, S.C.**

2004 MARSHALL SCHOLAR FINALIST

2003 GOLDWATER SCHOLAR

2000 NATIONAL SCHOLAR

Majors: Physics and computer science

Campus Involvement and Leadership: Wesley Foundation (Leadership Team), Clemson Tae Kwon Do Club, Chidokwan Karate Club, College of Engineering and Science Ambassadors, Dixon Fellows Program

Key Research: Finding better thermoelectrics to increase the endurance of the radioisotope thermal generators used in space probes

Internships and Learning Experiences: Clemson University Complex and Advanced Materials Laboratory (summer 2002); CERN (European Organization for Nuclear Research) in Geneva, Switzerland (summer 2003)

Select Courses Completed: Discrete Methods, Algorithms and Data Structures, Tools and Techniques for Software Development, Logic and Computing Devices, Experimental Physics, Modern Physics, Electromagnetics, Systems and Networks



MICHELLE MALECHA | FAIRMONT, MINN.

2000 NATIONAL SCHOLAR

Major: **Chemical engineering**

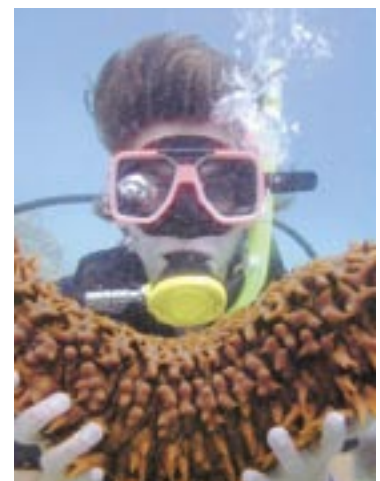
Campus Involvement and Leadership: **Alpha Lambda Delta, Gamma Sigma Sigma sorority (pledge class president), Clemson University Marching Band, College of Engineering and Science Ambassadors, Dixon Fellows Program**

Key Research: **Analysis of a deionized water system and a creams bulk manufacturing process to document potential manufacturing efficiencies**

Internships and Learning Experiences: **LeaderShape Institute; process engineer intern at Coty US LLC in Sanford, N.C. (summer 2003); study abroad at the University of Newcastle in Callaghan, Australia (fall 2002)**

Select Courses Completed: **Science, Culture and Human Values; Physics with Calculus; Chemical Engineering Thermodynamics; Engineering Mechanics: Statics; Calculus of Several Variables; Heat and Mass Transfer; Chemical Reaction Engineering**

"I hope I can leave Clemson University a better place and contribute back to Clemson. I'm confident that I have gained not only information and skills, but also the ability to keep learning. I honestly feel that Clemson has prepared me for anything I decide to do. A lot of my confidence stems from my experiences during the summer. Working as a real engineer allowed me to prove to myself that I have the engineering know-how and the people skills not only to survive but to thrive in the workplace. I am so fortunate to have had the opportunity to meet with and learn from so many great people through the National Scholars Program — advisers, staff, faculty, alumni; the list goes on and on. And all these people wanted to do everything they could to make sure I was successful. That support was wonderful!"



"The National Scholars Program has brought out in me a trait that is extremely valuable for an engineer: I'm confident in my ability to learn. It's amazing to me how many people come away from school with the idea that it's difficult to learn new things, and it's equally amazing how handicapping that can be, especially in a field like electrical engineering, where we're presented with new challenges and new technologies almost every day. The abilities I developed at Clemson will be some of my greatest assets. In addition, Clemson has taught me the value of time. At all levels — from the four years you spend at college to the spare hours between classes — my experience at Clemson has taught me how to value my time and make sure that I love what I'm doing with it."



ROBERT MCCOWEN | VALRICO, FLA.

2000 NATIONAL SCHOLAR

Major: **Electrical engineering**

Campus Involvement and Leadership: **Chidokwan Karate Club, Dixon Fellows Program**

Honors Thesis Topic: **Calculation of the charge distribution and current on a coaxial cable with an off-center conductor using the method of moments-**

Internships and Learning Experiences: **Study abroad in Florence, Milan, Rome and Venice, Italy (summer 2001); study and research on microwave circuits in Clemson labs (summer 2002)**

Select Courses Completed: **Engineering Problem Solving, Statics, Circuits, Thermodynamics and Heat Transfer, Advanced Calculus, Electromagnetics, System Design, Microwave Circuits**



ASHLEY NEAL | GALAX, VA.

2000 NATIONAL SCHOLAR

Major: **Biochemistry**

Campus Involvement and Leadership: Delta Gamma sorority (vice president for social standards), Pan-Hellenic Council Executive Board (vice president for public relations), Greek Judicial Review Board, Golden Key National Honor Society, The Honor Society of Phi Kappa Phi, Alpha Epsilon Delta (pre-med honors fraternity), Calhoun Honors College Committee, Rho Lambda (Pan-Hellenic honor society), Dixon Fellows Program

Key Research: The genetic regulation of border cell migration in *Drosophila melanogaster* as a model for tumor cell invasion in humans

Internships and Learning Experiences: The Children's Hospital in Greenville, S.C. (summer 2002); Baylor College of Medicine SMART (Summer Medical and Research Training) Program in Houston, Texas (summer 2003); LeaderShape Institute

Select Courses Completed: Physical Approaches to Biochemistry, Biochemistry of Metabolism, Cancer and Aging, Lifespan Development Psychology, Nucleic Acid and Protein Synthesis, Quantitative Analysis

"As a member of the National Scholars Program, I not only had the chance to participate in meaningful enrichment opportunities such as studying art and architectural history in Italy, but, more importantly, I had access to a network of supportive faculty and staff. My experiences as a National Scholar allowed me to broaden my horizons while I refined my personal goals. I wonder if I shall ever be as content as I am now, studying and relaxing with my peers in the foothills of the Blue Ridge Mountains in Clemson, S.C. I think the greatest lesson I have learned during my time at Clemson is that limitations are often self-imposed. Frequently, barriers exist because we allow them to exist, and overcoming these imagined restraints is a matter of personal choice. A single thought can be the difference between what is impossible and what is possible."



"The seminars, courses, travel experiences and discussions I have participated in as a Clemson National Scholar have greatly contributed to my education in regard to world issues, cultures and communication. I have also developed leadership skills and self-discipline in academics that will enable me to be successful at the graduate-education level. In the National Scholars Program, I am surrounded by a group of dedicated, focused, ambitious students who have inspired me to set and complete my goals. I have been able to define my goals more clearly through counseling from advisers in the program and from fellow National Scholars. I feel more prepared to meet my career goals because I have been a National Scholar."



ELIZABETH WARD | KNOXVILLE, TENN.

2000 NATIONAL SCHOLAR

Major: **English**

Campus Involvement and Leadership: Delta Gamma sorority (director of scholarship), Golden Key National Honor Society, Rho Lambda (Pan-Hellenic honor society), Big Brother/Big Sister, Pan-Hellenic Council (recruitment counselor), Dixon Fellows Program, Mortar Board

Honors Thesis Topic: An exploration of American literature by women during the temperance movement and the campaign for Prohibition

Internships and Learning Experiences: Egerton, McAfee, Armistead & Davis law firm in Knoxville, Tenn. (summer 2002); LeaderShape Institute; study abroad at the University of La Verne in Athens, Greece (summer 2003)

Select Courses Completed: Women's Studies, American Literature, Business Writing, American Social History, Women and Psychology, Feminist Literary Criticism, Gender Communication



CHRIS WELCH | CAMPOBELLO, S.C.

2004 RHODES SCHOLAR FINALIST
2002 GOLDWATER SCHOLAR
2000 NATIONAL SCHOLAR

Majors: Biological sciences and chemistry

Campus Involvement and Leadership: Omicron Delta Kappa, Student Senate (Academic Affairs Committee), Dixon Fellows Program

Key Research: Molecular biophysics research on alternative gene therapy techniques for the treatment of lung cancer

Internships and Learning Experiences: Western Michigan University NSF Research Experience for Undergraduates (REU) in signal transduction (summer 2001); Summer Undergraduate Research Program (summer 2002); Baylor College of Medicine SMART (Summer Medical and Research Training) Program in Houston, Texas (summer 2003)

Select Courses Completed: Ecology, Frontiers in Biology, Vertebrate Biology, Philosophy of Science, Toxicology, Physical Chemistry, Neurobiology, Evolutionary Biology, Advanced Organic Chemistry, Animal Behavior, Systems Physiology

"Academically, I don't think I could be better prepared than I am now. The National Scholars Program has given me the help and the opportunities I've needed to be competitive for graduate and medical school applications. The program has been a wonderful way to challenge me and keep me motivated toward bigger goals. Even though I don't like competition for the sake of competition, the friendly competition among some of us has been a strong motivator. The program has also been great as a sounding board for ideas, problems and help with everything from class scheduling to reading my personal statements for graduate school. Not all students have this available to them, and I don't believe that I would have gotten as far as I have without such help."





THE 2001 NATIONAL SCHOLARS



JENNY ALLEY

Central, S.C.

Major: **Psychology**

Campus Involvement and
Leadership: **Gamma Sigma
Sigma** sorority, Intramurals

(ultimate
Frisbee and soccer), Dixon Fellows Program,
Outdoors Club

Internships: Spanish translator at a health-care
clinic for migrant workers in Walhalla, S.C.
(summer 2003)



DARCY AUSTIN

Indian Harbour Beach, Fla.

Major: **Economics**

Campus Involvement and
Leadership: **Supplemental**

Instruction peer facilitator, Dixon Fellows
Program

Internships: **Clemson University Orientation
Ambassadors** (summer 2003)



KATHERINE CHISHOLM

Greenville, S.C.

Major: Mathematical sciences

Campus Involvement and Leadership: Campus Crusade for

Christ, Habitat for Humanity (treasurer and participant in 2002 global village trip to Guatemala), Alpha Chi Omega sorority (chapter relations and standards board), Alpha Lambda Delta (service chair), Pan-Hellenic Council, Dixon Fellows Program, Clemson University Guide Association, Relay for Life (team captain and historian), Intramurals (ultimate Frisbee team captain), LeaderShape Institute

Internships: Hinton Rural Life Center in Hayesville, N.C. (summer 2003)



MARK GRAMLING

Columbia, S.C.

Major: Biochemistry

Campus Involvement and

Leadership: Calhoun Society, Dixon Fellows Program, Tigeroar, Clemson University Guide Association, Men's Glee

Internships: Clemson University Biotech Research Center (summer 2003)



CASEY HANCOCK

Hartsville, S.C.

Major: Textile chemistry

Campus Involvement and

Leadership: WSBF-FM (DJ and member at large), Materials Science and Engineering Research Lab, Central Spirit, Phi Psi textile fraternity, Calhoun Society (president and treasurer), Dixon Fellows Program, American Association of Textile Chemists and Colorists (vice president), College of Engineering and Science Ambassadors

Internships: Friends of the Hunley (Confederate submarine) conservation project in Charleston, S.C. (summer 2003)



JACOB HICKS

Florence, S.C.

Major: Mathematical sciences

Campus Involvement and Leadership: Fellowship of

Christian Athletes, Intramurals (ultimate Frisbee team captain), Dixon Fellows Program

Internships: English teacher with Campus Crusade for Christ in Slovakia (summer 2003)



WILL SAMS

Anderson, S.C.

Major: Physics

Campus Involvement and

Leadership: Swim Club, Shag and Ballroom Dance Club, Student Alumni Association, Dixon Fellows Program

Internships: Clemson University Complex and Advanced Materials Laboratory (summer 2003)



CLARICE SEIFERT

Boise, Idaho

Major: Biochemistry

Campus Involvement and

Leadership: CU Symphony Orchestra (third-chair cello), biochemistry teaching assistant, Lady Tigers Soccer team, America Reads program, Athletes in Action, Golden Key National Honor Society, National Society of Collegiate Scholars, Lutheran Campus Ministry, Dixon Fellows Program

Internships: Let the Little Children Come program in Baja, Mexico (summer 2003)



WILL SPINK

Germantown, Tenn.

Major: **English and philosophy**

Campus Involvement and Leadership: *The Tiger* newspaper,

Reformed University Fellowship, Intramurals, Dixon Fellows Program



JEFF YOUNG

North Augusta, S.C.

Major: **Computer engineering**

Campus Involvement and Leadership: **Intramurals** (rac-

quetball team), WSBF-FM radio station, Dixon Fellows Program, Eta Kappa Nu



MIKE STADNISKY

Wilmington, Del.

Major: **Biochemistry**

Campus Involvement and

Leadership: **Rugby Club**, America Reads program, Student Senate (chair of Finance and Procedures Committee), President's Council on Community and Diversity, Biochemistry Club, Dixon Fellows Program

Internships: The Amazon Conservation Team in Washington, D.C. (summer 2003); Atlanta Botanical Garden (summer 2003)



JOE ZISKA

2003 Goldwater Scholar

Dover, Del.

Major: **Computer engineering**

Campus Involvement and Leadership: **Spirit II Rocket Program**, Intramurals (flag football, soccer, ultimate Frisbee and volleyball), Campus Crusade for Christ, Dixon Fellows Program

Internships: U.S. Department of Transportation (summer 2003), English teacher with Campus Crusade for Christ in Slovakia (summer 2003)



JEREMY STOVALL

Knoxville, Tenn.

Major: **Environmental and natural resources**

Campus Involvement and Leadership: **Outdoors Club**, Intramurals (ultimate Frisbee team), Quiz Bowl, Spirit II Rocket Program, Dixon Fellows Program

Internships: Oak Ridge National Lab in Oak Ridge, Tenn. (summer 2003)



THE 2002 NATIONAL SCHOLARS

MATT BAKER

Irmo, S.C.
Chemistry

BRIAN EYINK

St. Louis, Mo.
Economics

AMANDA CHEUNG

Greer, S.C.
Chemical engineering

JAMIE KEARNS

Jakarta, Indonesia
Biochemistry

MATT CLEMMENS

Aiken, S.C.
Mechanical engineering

AHMED MOHIUDDIN

Columbia, S.C.
Biochemistry

THE 2003 NATIONAL SCHOLARS

JEFF CLINKSCALES

Sumter, S.C.
Physics

RACHEL RHYNE

Seymour, Tenn.
Economics

ROB DIXON

Idaho Falls, Idaho
Computer science

CHRISTEN SMITH

Oak Ridge, Tenn.
Biosystems engineering

STEPHEN GOSNELL

Landrum, S.C.
Physics

LAUREN SMITH

Greer, S.C.
Business

KELLY HARLESS

Princeton, W.Va.
Chemistry

SUZANNE WEAVER

Charlotte, N.C.
Biochemistry

LAURA HART

Cincinnati, Ohio
Biochemistry

YOUSEF YASIN

Johnson City, Tenn.
Biochemistry

KATE HICKS

Greenville, S.C.
Mechanical engineering

AMANDA YOEUELL

Chattanooga, Tenn.



CLEMSON'S PREMIER SCHOLARSHIP PROGRAM



The Clemson University National Scholars Program provides a select number of extraordinary students with an extraordinary educational experience that includes the following:

- A full four-year scholarship covering tuition, housing and other fees
- Summer study in Europe
- A state-of-the-art laptop computer
- A four-year sequence of academic programs and seminars exploring critical thinking and leadership
- Ongoing enrichment opportunities throughout their four years at Clemson

The Clemson National Scholars are also members of Calhoun Honors College, which provides advanced course work and research opportunities as well as support in competing for major national and international fellowships. Everyone at Clemson University is committed to providing an unmatched undergraduate experience to each of our Clemson National Scholars.

A Great University

Clemson is located on the shores of Lake Hartwell and in the foothills of the Blue Ridge Mountains in South Carolina. More than 16,500 students call Clemson home and pursue degrees in more than 80 areas of undergraduate study and 100 areas of graduate study, from engineering and the sciences to business and English. Clemson University is one of the nation's top-ranked public universities according to *TIME* magazine, *U.S. News & World Report* and *Kaplan/Newsweek*.

The Selection Process

To be considered for the Clemson National Scholars Program, applicants complete a Clemson University undergraduate admissions application. After a review of these applications, a selection committee narrows the field to approximately 40 finalists, who are invited to Clemson National Scholars Weekend in the early spring. Scholarships are awarded shortly afterward.

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